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Response to Office Action Dated 20 April 2004

REMARKS

As background information, the Response is submitted in response to the Office Action of 20 April 2004. Claims 1—20 were originally filed. Claims 3, 7, 10 and 11 were previously canceled, and claim 15 is currently cancelled, without prejudice of the right to re-file the same or similar claims. No claims are newly added. Accordingly, claims 1, 2, 4—6, 8, 9, 12—14 and 16—20 are currently pending. At this time, all claims are rejected. In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the rejected claims.

10 **35 U.S.C. §102**

Claims 12—16 and 18—20 were rejected as being anticipated by U.S. patent 6,357,845, herein after Kuwabara or the '845 reference. The Applicant respectfully traverses the rejections.

The Kuwabara Reference

15 The Kuwabara reference teaches the use of an inkjet device in a process whereby leather is colored (e.g. Fig. 1). Referring to Fig. 16 of Kuwabara, inkjet 14 provides an ink permeation controlling agent (col. 45, lines 13—17), inkjet 15 provides a leather coloring function (col. 44, line 60), inkjet 16 provides a fixing agent (col. 44, lines 50) and inkjet 17 provides a finishing
20 coat (col. 45, line 15).

Accordingly, Kuwabara teaches the following sequence:

1. Ink permeation controlling agent (inkjet 14);
2. Coloring ink (inkjet 15);

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3. Fixing agent (inkjet 16); and

4. Finishing coat (inkjet 17).

The fixer is used as an image controlling agent (col. 44, line 45) after the ink is applied, i.e., the fixer fixes the ink, not the overcoat. The finishing coat

5 is not well-disclosed, but is put on after the fixing agent.

Claim 12 was rejected under section 102 as being anticipated by the Kuwabara reference. The Applicant respectfully traverses the rejection.

Claim 12 has been amended to more precisely recite the relationship between the overcoat solution and the fixer solution. In particular, claim 12
10 has been amended to include the elements recited in claim 15 (which was also rejected under 102 due to Kuwabara). The amendment emphasizes the novelty of the Applicant's use of a reaction between the fixer *and the overcoat* to result in water insolubility, which is not seen in Kuwabara. As amended, claim 12 recites:

15 An ink jet imaging device to generate a smudge resistant image, the device comprising:
a processor coupled to a memory, the memory containing computer-executable instructions for:
generating, by a first carriage in a printing zone, an image on a
20 print medium; and
depositing, by a second carriage in an image protecting zone, an overcoat solution and a fixer solution onto the image to form a substantially smudge resistant image, wherein the overcoat solution in combination with the fixer solution
25 are water insoluble.

The Kuwabara reference fails to disclose the elements of claim 12, as amended to include the material of claim 15. In particular, Kuwabara fails to disclose: (1) an overcoat solution (covering) which combines with the fixer:

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and (2) wherein the combined overcoat and fixer become water insoluble, as recited by claim 12. (This reaction is disclosed, for example, at 0022, Applicant's specification.) In contrast to the elements recited by claim 12, Kuwabara discloses a fixing agent which immediately reacts with the ink (not
5 with the overcoat) to become insoluble.

Kuwabara discloses a fixing agent and a finishing coat that do not show the elements of the recited claim. In particular, the Kuwabara fixing agent reacts with the ink, and is therefore an "image fixing agent" (Kuwabara col. 44, line 50). In contrast, the claim recites that the fixer combines with the overcoat
10 solution. Thus, Kuwabara fails to disclose the relationship between the overcoat solution and the fixer solution recited by the claim, and instead discloses a fixer reacting with the ink (image).

Additionally, Kuwabara discloses application of the finishing coat as a singular step; i.e. as a step not followed by a related step in which the fixing
15 agent is applied to react with the overcoat solution. Therefore, Kuwabara discloses a simple (one-step) overcoat solution. In contrast, the claim recites a more complex (two-step) process wherein the overcoat solution is combined with the fixer solution.

Referring to the passages cited by the Patent Office, we see that the
20 Kuwabara reference discloses a reaction between the fixer and the ink, not a reaction between the fixer and the overcoat.

Therefore, Kuwabara applies ink, then fixer (to fix the ink), then overcoat. Kuwabara does not (as recited by the claim) apply ink, then

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overcoat, then fixer (to combine with the overcoat). Thus, since Kuwabara discloses fixing the ink, not fixing the overcoat, Kuwabara does not disclose "depositing ... an overcoat solution and a fixer solution ... wherein the overcoat solution in combination with the fixer solution are water insoluble," as recited by the Applicant's claim 12. Accordingly, Kuwabara does not teach the elements of the claim, and the Applicant respectfully requests that the section 102 rejection be removed.

Claim 13 was rejected under section 102 as being anticipated by the Kuwabara reference. The Applicant respectfully traverses the rejection. Claim 13 depends from claim 12, which is allowable for the reasons discussed above. Accordingly, claim 13 is allowable as being dependent upon an allowable claim, as well as for reasons associated with the elements recited in claim 13.

Claim 14 was rejected under section 102 as being anticipated by the Kuwabara reference. The Applicant respectfully traverses the rejection. Claim 14 recites "wherein the image is generated by one or more first pens positioned on the first carriage, and wherein the overcoat and fixer solution are deposited by one or more second pens positioned on the second carriage."

The Patent Office suggests that the overcoat and fixer are deposited by one or more pens *on a second carriage*. In fact, Fig. 16 shows that the coloring inkjet, the fixer and the overcoat are all on separate carriages, 1502, 1602 and 1702, respectively. Thus, the overcoat and the fixer are not deposited by one or more pens *on the second carriage*, as recited. Accordingly, Kuwabara does not

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teach the elements of the claim, and the Applicant respectfully requests that the section 102 rejection be removed.

Claim 15 has been cancelled, and the material recited in this claim moved into claim 12. Accordingly, the section 102 rejection of claim 15 was addressed with respect to the rejection of claim 12.

Claim 16 was rejected under section 102 as being anticipated by the Kuwabara reference. The Applicant respectfully traverses the rejection. Claim 16 recites "wherein the overcoat solution comprises an acrylate polymer" (emphasis added).

In the passage cited by the Patent Office, the Kuwabara reference discloses urethane, acrylic and/or casein. However, acrylate polymer is not specifically disclosed. Acrylate polymer (as recited in the claim) and acrylic (as disclosed by Kuwabara) are distinct chemicals. Accordingly, Kuwabara does not teach the exact elements of the claim, and the Applicant respectfully requests that the section 102 rejection be removed.

Claim 18 was rejected under section 102 as being anticipated by the Kuwabara reference. The Applicant respectfully traverses the rejection. Claim 18 recites "depositing, by a second carriage in an image protecting zone, an overcoat solution and a fixer solution onto the image such that the image is substantially smudge resistant." The Applicant hereby incorporates most of the claim 1, 12 and 20 arguments in this location.

The Kuwabara reference discloses application of a fixer and an overcoat using two carriages (e.g. the third and fourth carriages 1602 and 1702 of Fig.

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16 of Kuwabara). Kuwabara does not disclose a structure adapted to that it will deposit "by a *second carriage* in an image protecting zone, an overcoat solution *and* a fixer solution." That is, Kuwabara teaches how fixer and overcoat may be applied using *separate* carriages; however, Kuwabara does not disclose how fixer and overcoat can be applied using a second carriage (the first carriage being used for printing). Accordingly, Kuwabara does not teach the exact elements of the claim, and the Applicant respectfully requests that the section 102 rejection be removed.

Claim 19 was rejected under section 102 as being anticipated by the Kuwabara reference. The Applicant respectfully traverses the rejection. Claim 19 depends from claim 18, which is allowable for the reasons discussed above. Accordingly, claim 19 is allowable as being dependent upon an allowable claim, as well as for reasons associated with the elements recited in claim 19.

Claim 20 was rejected under section 102 as being anticipated by the Kuwabara reference. The Applicant respectfully traverses the rejection. Claim 20 has been amended similarly to claim 12, incorporating the elements recited in claim 15. Accordingly, claim 20 is allowable for at least the reasons claim 12 is allowable, and those arguments are incorporated here. In particular, Kuwabara discloses a fixer for use with the ink, but does not show a fixer for use with the overcoat. Accordingly, the Applicant respectfully requests that the section 102 rejection of claim 20 be removed.

35 U.S.C. §103

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Claims 1, 2, 4—6, 8, 9 and 17 were rejected as being unpatentable over Kuwabara in view of the Moriyama reference.

Claim 1, as amended, recites in part “depositing an overcoat solution onto the image; and depositing a fixer solution, configured for reaction with the overcoat solution, onto the overcoat solution.” The amendments to claim 1 more particularly recite elements seen elsewhere which are related to the combination of the fixer solution and the overcoat solution. For example, in original claim 15, the combination of the overcoat solution and the fixer solution resulted in water insolubility.

Claim 1 and claim 4, therefore, address the issue of combination of the overcoat solution and the fixer solution. The arguments associated with claim 12 are therefore incorporated here.

The Kuwabara reference fails to disclose an overcoat solution which combines with the fixer. And with reference to claim 4, Kuwabara fails to disclose that the fixer and the overcoat solutions react to become water insoluble. In contrast to the recited claim, Kuwabara discloses a fixing agent which immediately reacts *with the ink* (not the overcoat) to become insoluble (see Kuwabara, top of col. 20).

Kuwabara discloses a fixing agent and a finishing coat that do not show the elements of the recited claim. In particular, Kuwabara teaches that the fixing agent reacts *with the ink*, and is therefore an “image fixing agent” (col. 44, line 50). In contrast, the claim recites that the fixer combines *with the*

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overcoat solution. Thus, Kuwabara fails to disclose the relationship between the overcoat solution and the fixer solution recited by claim 1.

Referring to the passages cited by the Patent Office related to combination of overcoat and fixer, we see that the Kuwabara reference
5 discloses a reaction between the fixer and *the ink*, not a reaction between the fixer and *the overcoat*.

Therefore, Kuwabara applies ink, then fixer (to fix the ink), then overcoat. Kuwabara does not (as recited by claim 1) apply ink, then overcoat, then fixer (to react with the overcoat) to form a water insoluble result (as
10 recited by claim 4). Thus, Kuwabara does not disclose "depositing, using a second carriage in an image protecting zone, an overcoat solution onto the image and a fixer solution, configured for reaction with the overcoat solution, onto the overcoat solution," as recited by Applicant's claim 1, to achieve an insoluble result (as recited by claim 4). Accordingly, Kuwabara does not teach
15 the elements of the claim, and the Applicant respectfully requests that the section 103 rejection be removed.

Claims 2, 5, 6, 8 and 9 depend from claim 1, which is allowable for at least the reasons seen above. Accordingly, these claims are allowable due to their dependence from an allowable claim, as well as for reasons associated
20 with the elements recited in each claim. For example, claim 5 recites an acrylate polymer. As seen in the discussion of claim 16 (the argument for which is incorporated here) the Kuwabara reference discloses only the use of a similar material. Additionally, the passage in Kuwabara cited with respect to

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claim 6 indicates "a *high*-molecular weight substance" wherein the claim recites "a *low* molecular weight polymer with a high charge density" (emphasis added). Moreover, the cited passage is silent on the issue of charge density. Accordingly, the elements recited in claim 6 are not disclosed by the

5 references.

Claim 17 was rejected under section 103 as being unpatentable over Kuwabara in view of Moriyama. The Applicant respectfully traverses the rejection. Claim 17 depends from claim 12 which is allowable for at least the reasons seen, above. Accordingly, claim 17 is allowable due to its dependence

10 from an allowable claim, as well as for reasons associated with the elements recited.

Conclusion

The Applicant submits that all of the claims are in condition for allowance and respectfully requests that a Notice of Allowability be issued. If

15 the Office's next anticipated action is not the issuance of a Notice of Allowability, the Applicant respectfully requests that the undersigned attorney be contacted for the purpose of scheduling an interview.

Respectfully Submitted,

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Dated: 8-13-04

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